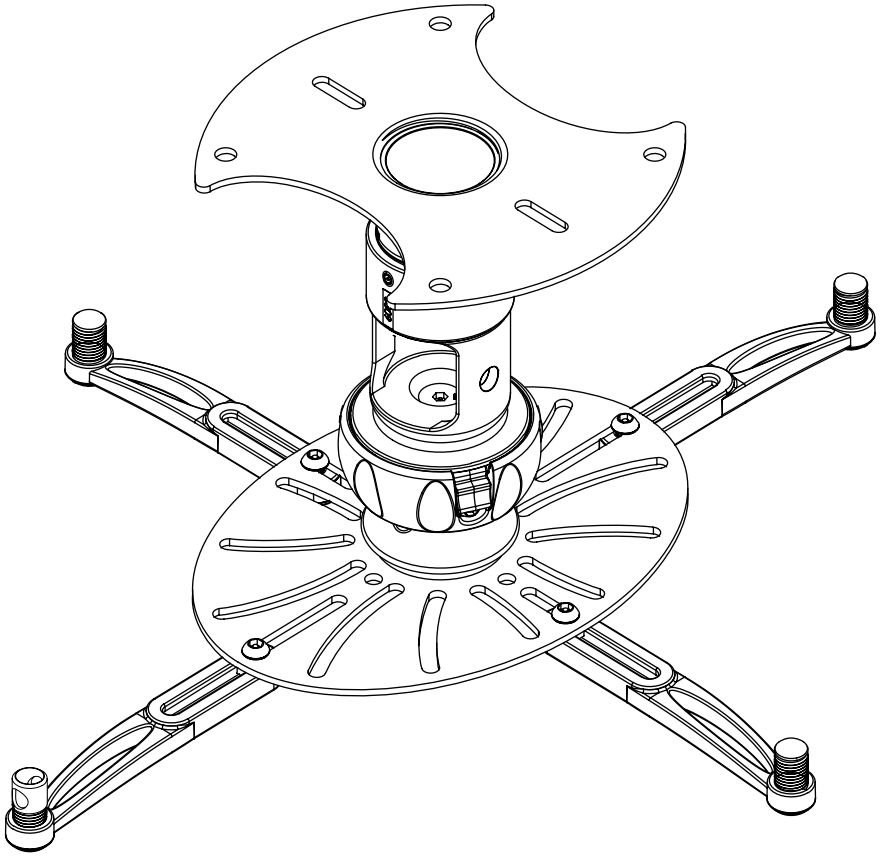
PREMIER MOUNTS®
CREATING POSITIVE CUSTOMER EXPERIENCES

INSTALLATION INSTRUCTIONS



SPI-PRO

SpiroLock™ Universal Projector Mount For 1½" NPT

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9530-005-073-05

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Weight Limit

Maximum Projector Weight: 45 lbs.

THE CEILING STRUCTURE MUST BE CAPABLE OF SUPPORTING AT LEAST FIVE TIMES THE WEIGHT OF THE PROJECTOR. IF NOT, THE CEILING STRUCTURE MUST BE REINFORCED.

Warning Statements

PRIOR TO THE INSTALLATION OF THIS PRODUCT, THE INSTALLATION INSTRUCTIONS MUST BE READ AND COMPLETELY UNDERSTOOD. KEEP THESE INSTALLATION INSTRUCTIONS IN AN EASILY ACCESSIBLE LOCATION FOR FUTURE REFERENCE.

PROPER INSTALLATION PROCEDURE BY A QUALIFIED SERVICE TECHNICIAN MUST BE FOLLOWED, AS OUTLINED IN THESE INSTALLATION INSTRUCTIONS. FAILURE TO DO SO COULD RESULT IN PROPERTY DAMAGE, SERIOUS PERSONAL INJURY, OR EVEN DEATH.

SAFETY MEASURES MUST BE PRACTICED AT ALL TIMES DURING THE ASSEMBLY OF THIS PRODUCT. USE PROPER SAFETY EQUIPMENT AND TOOLS FOR THE ASSEMBLY PROCEDURE TO PREVENT PERSONAL INJURY.

PREMIER MOUNTS DOES NOT WARRANT AGAINST DAMAGE CAUSED BY THE USE OF ANY PREMIER MOUNTS PRODUCT FOR PURPOSES OTHER THAN THOSE FOR WHICH IT WAS DESIGNED OR DAMAGE CAUSED BY UNAUTHORIZED ATTACHMENTS OR MODIFICATIONS, AND IS NOT RESPONSIBLE FOR ANY DAMAGES, CLAIMS, DEMANDS, SUITS, ACTIONS OR CAUSES OF ACTION OF WHATEVER KIND RESULTING FROM, ARISING OUT OF OR IN ANY MANNER RELATING TO ANY SUCH USE, ATTACHMENTS OR MODIFICATIONS.

At least two qualified people should perform the assembly procedure. Personal injury and/or property damage can result from dropping or mishandling the projector.

If mounting to wall studs or ceiling studs, make sure that the mounting screws are anchored into the center of the wall studs or ceiling studs. Use of an edge-to-edge stud finder is recommended.

Be aware of the mounting environment. If drilling and/or cutting into the mounting surface, always make sure that there are no electrical wires in wall. Cutting or drilling into an electrical line may cause serious personal injury.

Make sure there are no water or natural gas lines inside the wall where the mount is to be located. Cutting or drilling into a water or gas line may cause severe property damage or personal injury.

This product is intended for indoor use only. Use of this product outdoors could lead to product failure and/or serious personal injury.

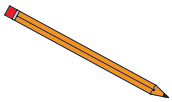
Do not install near sources of high heat. Do not install on a structure that is prone to vibration, movement or chance of impact.

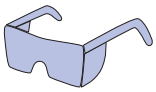
Contact Premier Mounts with any questions:
1-800-368-9700
techsupport@mounts.com

Installation Tools

The following tools may be required depending upon your particular installation. They are not included.

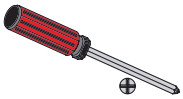
Electronic Stud Finder


Pencil


Protective Eyewear

Hand Held Drill

⅛″ Drill Bit (Wood)


Phillips Head Screwdriver

5/16″ Masonry Drill Bit

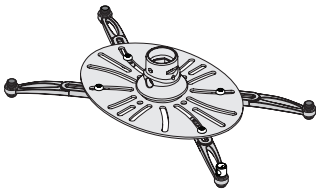
Hammer

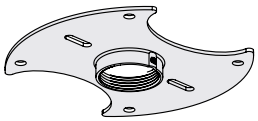
Ladder

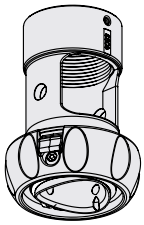
Parts List

Make sure your Premier Mounts product has the following hardware and components before beginning installation. If there are parts missing and/or damaged, stop the installation and call Premier Mounts at (800) 368-9700.

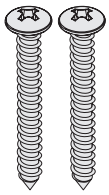
SpiroLock™ For 1½" NPT Hardware


SpiroLock™ Projector Plate
(w/ pre-installed mounting legs)
(Qty 1)

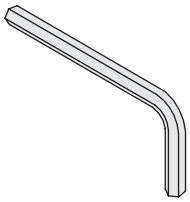

SpiroLock™ Ceiling Plate
(Qty 1)

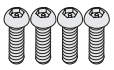

SpiroLock™ Twist Lock Collar
(Qty 1)

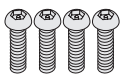
Close Nipple
(Qty 1)

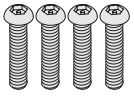

#14 x 2″ Wood Screws
(Qty 2)

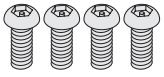
M3 Security Allen
Wrench (Qty 1)

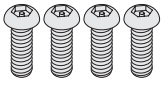

M5 Security Allen
Wrench (Qty 1)

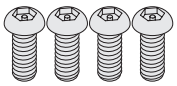

M2.5 x 10mm Security Screw
(Qty 4)

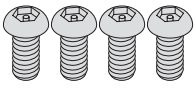

M2.5 x 12mm Security Screw
(Qty 4)


M3 x 16mm Security Screw
(Qty 4)


M4 x 10mm Security
Screw (Qty 4)


M4 x 12mm Security Screw
(Qty 4)


M5 x 12mm
Security Screw
(Qty 4)


M6 x 12mm Security Screw
(Qty 4)

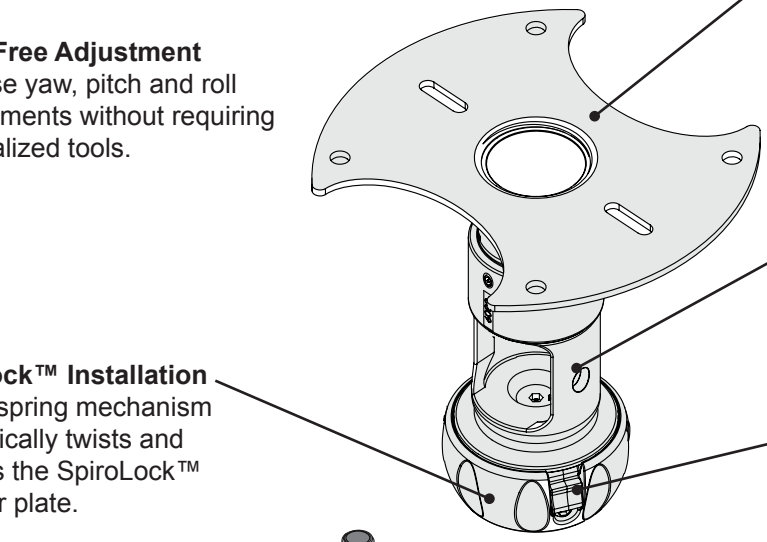
¼-20 x 5/16″ Security Screw
(Qty 1)

M3 Flat Washer
(Qty 10)

Barrell Cap
(Qty 4)

Features

The SpiroLock™ Universal Projector Mount is easy to install. Snap and lock the projector onto the mount, then rotate and pivot freely for the optimal viewing angle. The Lock-It™ security screws and leveling barrel add an extra layer of security and theft deterrence.



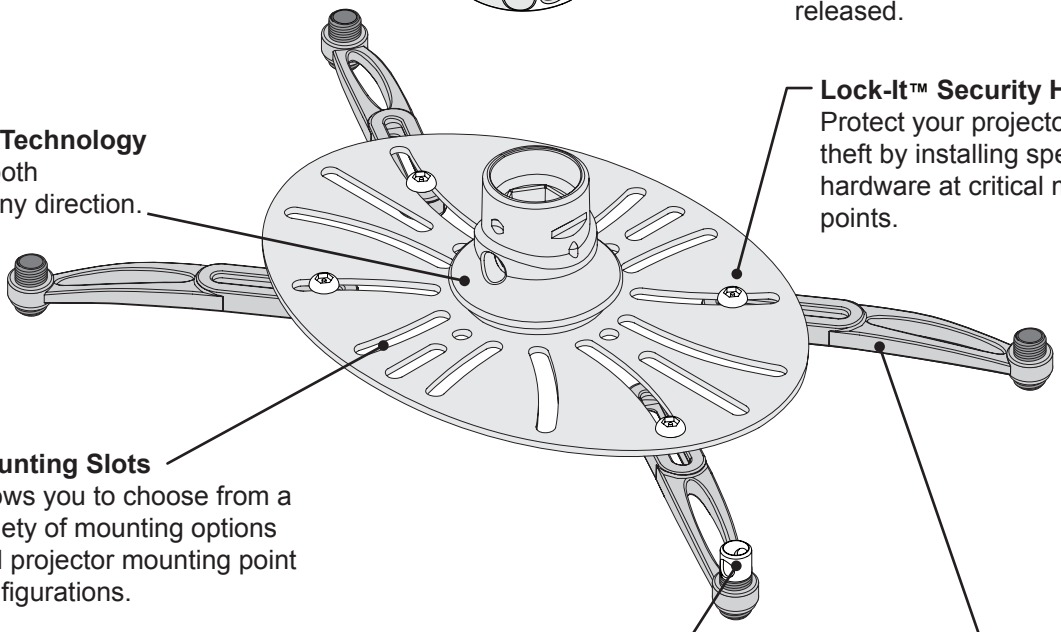
Ceiling Plate
Can easily be installed on either a wood stud or solid ceiling.

Tool-Free Adjustment
Precise yaw, pitch and roll adjustments without requiring specialized tools.

1-1/2" NPT Coupler
Can attach the mount to a 1-1/2" standard threaded pipe or one of Premier Mounts adjustable-height ceiling adapters.

SpiroLock™ Installation
Torsion spring mechanism automatically twists and captures the SpiroLock™ projector plate.

Locking Tab and Lock-It™ Screw
Assures that the projector plate releases only when you want it released.



Lock-It™ Security Hardware
Protect your projector from theft by installing specialized hardware at critical mounting points.

Radial Glide® Technology
Up to 6º of smooth adjustment in any direction.

Mounting Slots
Allows you to choose from a variety of mounting options and projector mounting point configurations.

Security Leveling Barrel
Allows the user to easily secure the mount with a padlock or a steel-cable locking system (PCB-CSL1).

Mounting Legs
Combined with the numerous projector plate mounting slots, the mounting legs allow for multiple mount configurations.

Installing the SpiroLock™

Introduction

You may secure the SpiroLock™ mount to a single ceiling stud; a solid surface ceiling, such as concrete; a 1-1/2” NPT pipe; or a Premier Mounts ceiling adapter.

See the Premier Mounts Website at www.mounts.com for compatible ceiling adapters.

Read these installation instructions thoroughly before attempting to install the Premier Mounts product.

Familiarize yourself with the contents of the package and make sure you have all the parts and tools you need to safely complete the installation.

Step 1

How are you installing the SpiroLock™?

If you are using a wood stud, proceed to **“Wood Stud Installation”** on page 6.

If you are using a solid surface, such as a concrete ceiling, proceed to **“Solid Ceiling Installation”** on page 8.

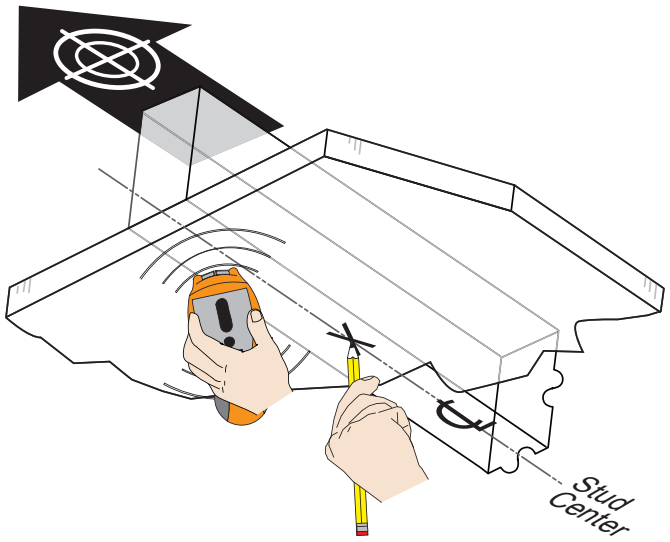
If you are using a 1-1/2” NPT pipe or Premier Mounts ceiling adapter, proceed to **“Attaching to a 1-1/2” NPT Pipe”** on page 10.

Wood Stud Installation

Step 1

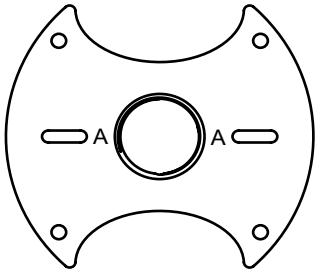
1. Use an electronic stud finder to locate a ceiling stud closest to your desired installation location.
2. Identify the center of the ceiling stud.
3. Use a pencil to mark the location of the ceiling stud center.

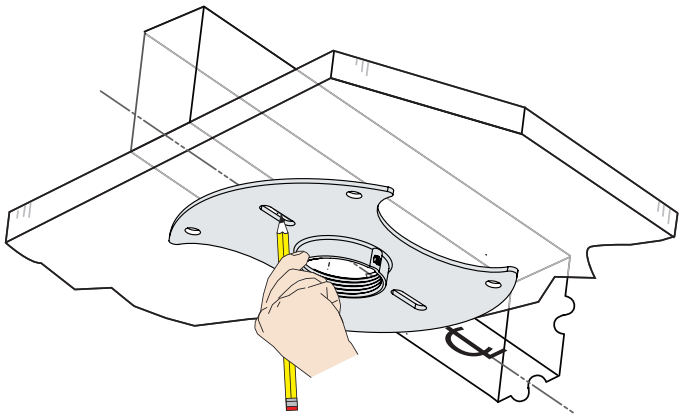
The target arrow indicates the direction of the projector screen relative to the projector mount.



Step 2

1. Place the SpiroLock™ Ceiling Plate against the ceiling. Its mounting holes should align with the center of the ceiling stud.
2. Use a pencil and mark two (2) mounting hole locations through each of the mounting points (**A**) in the SpiroLock™ Ceiling Plate.



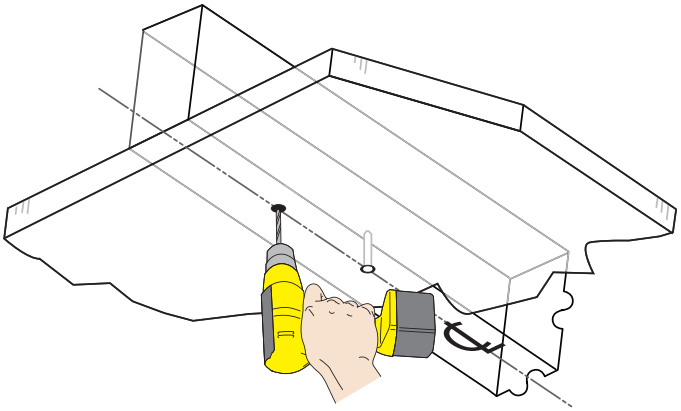


Step 3

1. Remove the SpiroLock™ Ceiling Plate and set it aside.
2. Drill a pilot hole in the center of each mark using a hand held drill and a 1/8″ drill bit.

Pro Tip

Pilot Holes
When a screw is driven into a material, such as wood, it can act as a wedge, generating outward pressure which can cause many materials to split. Drilling a small pilot hole where the screw will be driven causes less 'wedging' to take place, thereby reducing the likelihood of the material being split. It also reduces the possibility of the screw head getting sheared off by torque.



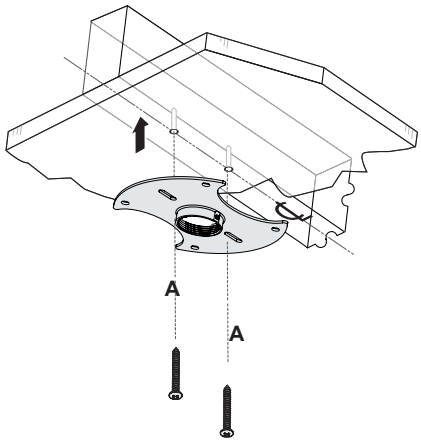
Wood Stud Installation (cont'd)

Step 4

1. Insert one (1) #14 x 2″ screw through each of the mounting holes (**A**) on the bottom of the SpiroLock™ Ceiling Plate and into the pilot holes.
2. Tighten each screw until the SpiroLock™ Ceiling Plate is secure against the ceiling.

Do not overtighten the #14 x 2″ screws.

If applicable, drill a hole above the mounting hole for wiring access.



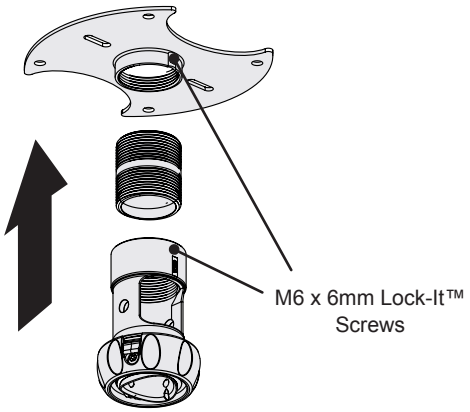
Step 5

1. Secure the SpiroLock™ and close nipple onto the Ceiling Plate.
2. Use an M3 Allen wrench to tighten the M6 x 6mm Lock-It™ screws in the Ceiling Plate and SpiroLock™ twist lock collar.

Do not overtighten the Lock-It™ screws.

3. Route any cables up through the SpiroLock™ and into the ceiling structure.

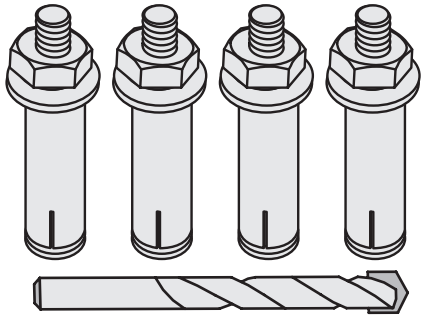
Proceed to **"Attaching the Projector Plate"** on page 11.



Solid Ceiling Installation

Introduction

You can mount the SpiroLock™ projector mount to any solid surface ceiling that has a minimum 6″ thickness. For concrete installation use concrete wedge anchors (¼″ recommended) to secure the mounting hardware and a masonry drill bit to drill the pilot holes. Wedge anchors and masonry drill bits are not supplied, but you can purchase them at your local hardware store.

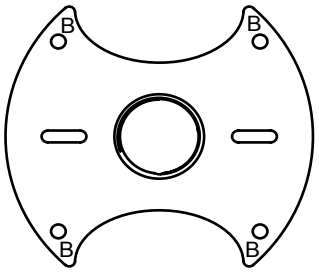


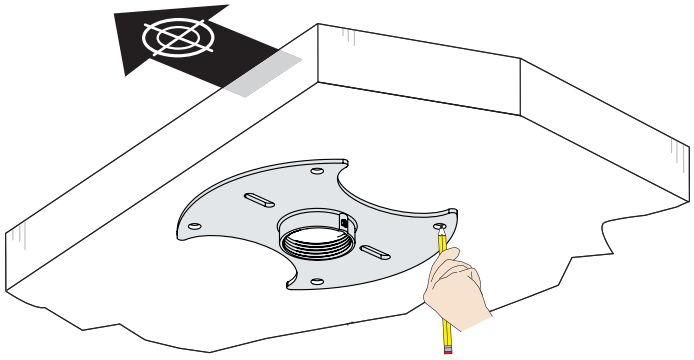
Example Wedge Anchors and Masonry Bit
Not included

Step 1

1. Place the SpiroLock™ Ceiling Plate into position against the ceiling.
2. Use a pencil and mark four (4) mounting hole locations through each of the mounting points (**B**) in the SpiroLock™ Ceiling Plate.

The target arrow indicates the direction of the projector screen relative to the projector mount.

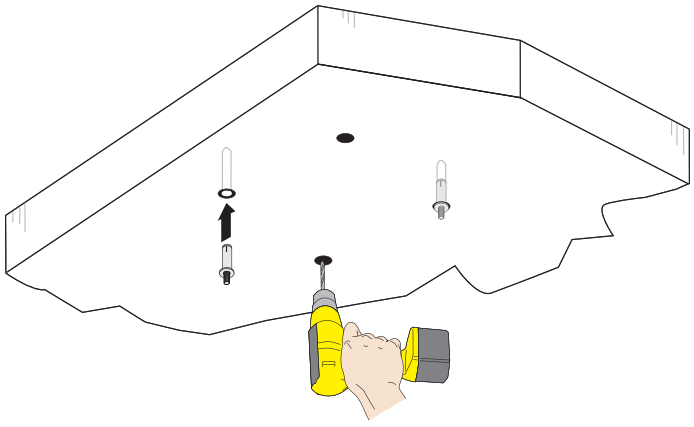




Step 2

1. Drill a hole at each mark using the appropriate diameter masonry bit for your wedge anchor.
2. Remove the nut and washer from the wedge anchors.
3. Insert a wedge anchor into each hole.

If necessary, use a hammer to lightly tap each wedge anchor into place.



Solid Ceiling Installation (cont'd)

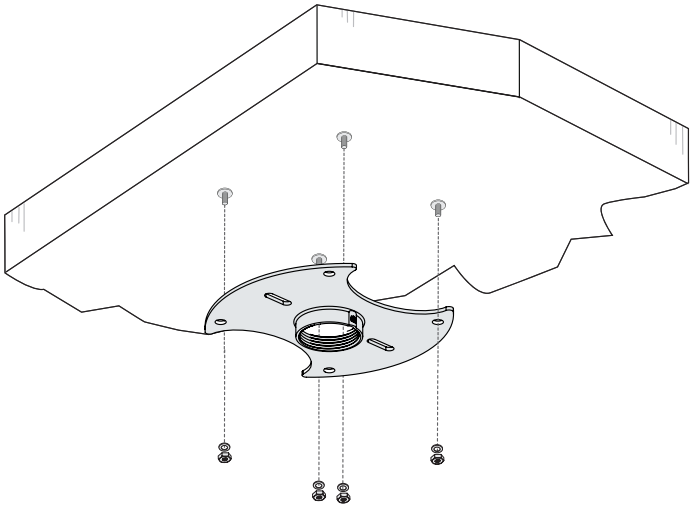
Step 3

1. Move the SpiroLock™ Ceiling Plate back into position.
2. Thread a wedge anchor nut (and washer, if provided with the wedge anchor) onto each threaded wedge anchor shaft.

Do not tighten any of the wedge anchor nuts (and any washers) until all nuts and washers are threaded onto the shafts.

Do not overtighten the wedge anchor nuts.

If applicable, drill a hole above the mounting hole for wiring access.



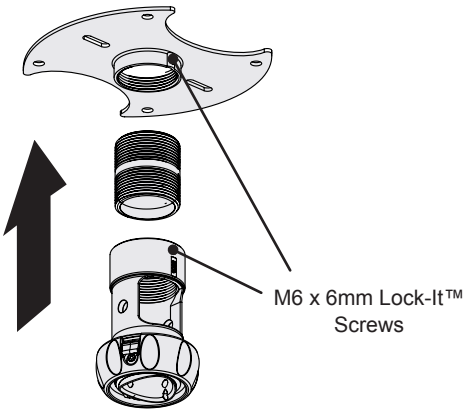
Step 4

1. Secure the SpiroLock™ and close nipple onto the Ceiling Plate.
2. Use an M3 Allen wrench to tighten the M6 x 6mm Lock-It™ screws in the Ceiling Plate and SpiroLock™ twist lock collar.

Do not overtighten the Lock-It™ screws.

3. Route any cables up through the SpiroLock™ and into the ceiling structure.

Proceed to **"Attaching the Projector Plate"** on page 11.



Attaching to a 1-1/2” NPT Pipe

See the Premier Mounts Website at www.mounts.com for compatible ceiling adapters.

❶ Secure a 1-1/2” NPT pipe or Premier Mounts ceiling adapter into the ceiling.

This step does not require the use of the Ceiling Plate or close nipple.

❷ Attach the SpiroLock™ to the NPT pipe (Figure 1).

Make sure the SpiroLock™ is threaded into the NPT pipe at least four complete turns. If you have trouble turning, insert a screwdriver through both access holes and apply pressure when turning the SpiroLock™ (Figure 2).

❸ Use an M3 Allen wrench to tighten the M6 x 6mm Lock-It™ screws in the SpiroLock™ coupler to secure it to the NPT pipe.

Do not overtighten the Lock-It™ screws.

❹ Route any cables up through the SpiroLock™ and into the ceiling structure.

Proceed to **“Attaching the Projector Plate”** on page 11.

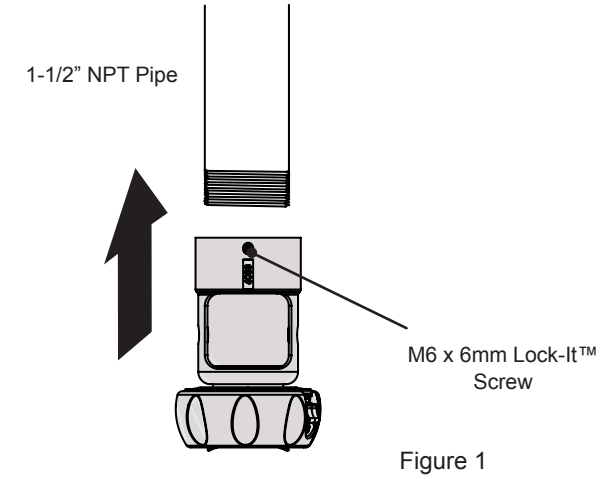


Figure 1

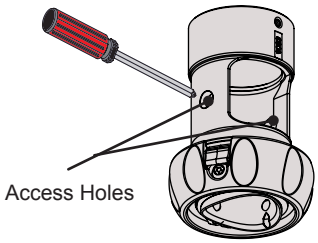


Figure 2

Attaching the Projector Plate
Selecting the Mounting Hardware

1. Insert a small straw or toothpick into the threaded inserts found on the bottom or top of the projector.
2. Use a pencil to mark the depth of the threaded insert on the small straw or toothpick.
3. Mark the straw or toothpick 1/8” above the depth of the threaded insert, as shown in Figure 1.
4. Insert the small straw or toothpick into the remaining threaded inserts to compare and verify their depth using the straw or toothpick’s 1/8” allowance mark.
5. Locate the correct diameter screw for the threaded insert.

If the screw you selected is longer than the 1/8” allowance mark on the small straw or toothpick, as shown in Figure 2 and Figure 3, do not use this screw. The screw length must not bypass the mark.

6. Test each size of the screws provided.

   The correct screws should thread easily into the mounting point and not pull out when tension is applied.

Does your projector have a single mounting point or multiple mounting points?

If it has a single mounting point, remove the mounting legs and skip to the **“Single Mounting Point Installation”** section on page 14.

If it has multiple mounting points, proceed to the **“Multiple Mounting Point Installation”** section below.

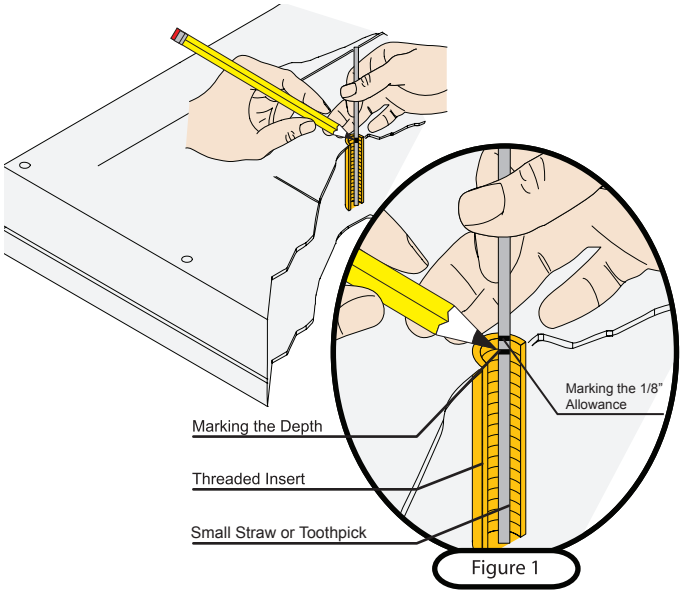


Figure 1

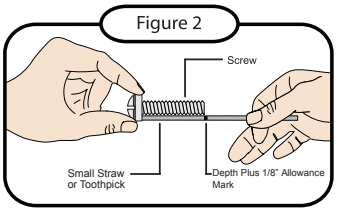


Figure 2

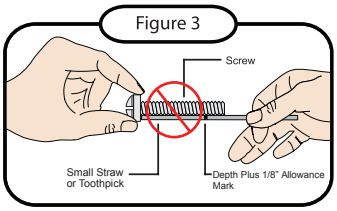
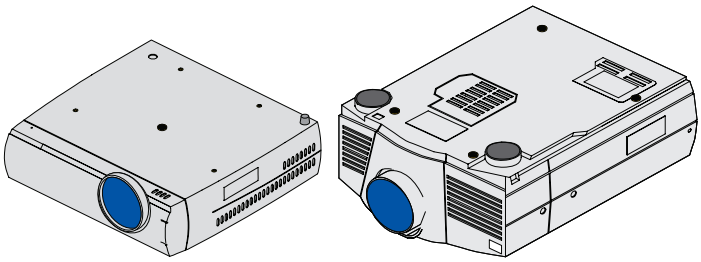


Figure 3



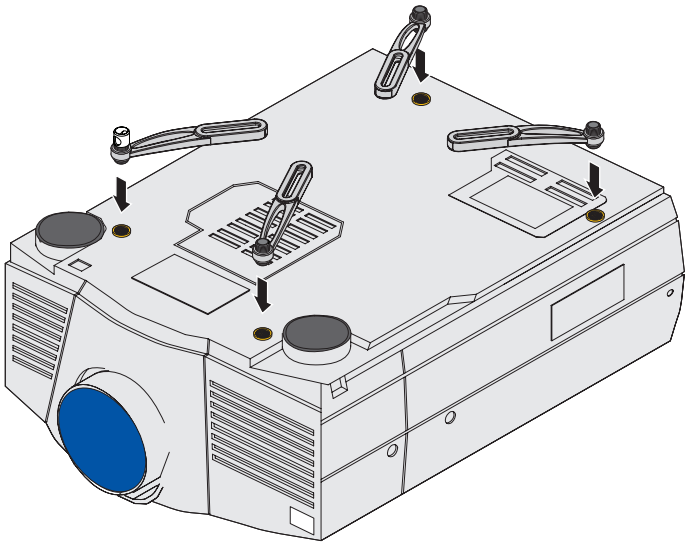
Multiple Mounting Point Installation

Step 1

1. Locate the projector’s mounting points.
2. Position an appropriate number of mounting legs on the projector.

The mounting legs are pre-installed, but you can re-attach three (3) or four (4) mounting legs to a variety of mounting slots on the SPI-PRO Projector Plate. Please follow the requirements of the projector.

The number and placement of mounting points on projectors varies between projector manufacturers. Refer to the projector’s technical specifications for the number and location of the mounting points.

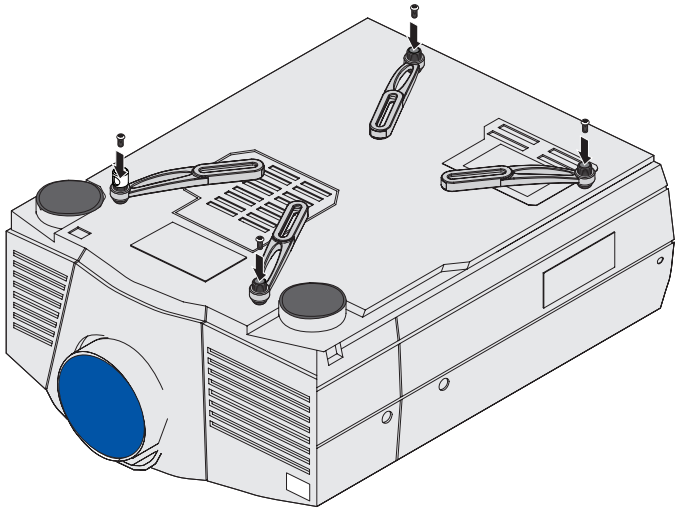


Attaching the Projector Plate (cont'd)

Step 2

Insert the mounting hardware, as determined in **"Selecting the Mounting Hardware"**, through the leveling barrel into the thread insert of the projector.

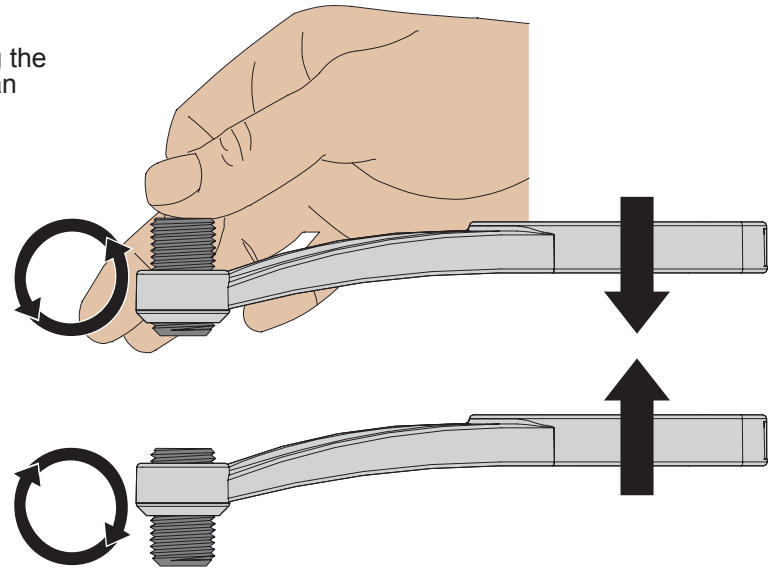
Do not tighten the mounting hardware at this time.



Step 3

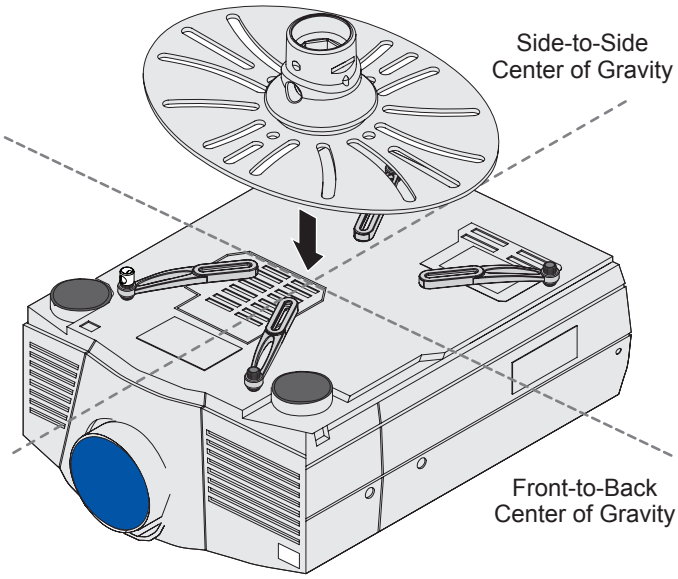
Raise or lower each of the mounting legs, by rotating the leveling barrels, until all of the mounting legs are at an equal height.

- Lower the mounting legs by rotating the leveling barrel counter-clockwise.
- Raise the mounting legs by rotating the leveling barrel clockwise.



Step 4

1. Identify the projector's approximate front-to-back center of gravity. Place your hands on each side of the projector and gently lift it an inch from the surface on which it is resting. Carefully adjust your grip on the projector until it seems balanced from front-to-back. Mentally note the apparent center of gravity.
2. Identify the projector's approximate side-to-side center of gravity. Place your hands on the front and back of the projector and gently lift it an inch from the surface on which it is resting. Carefully adjust your grip on the projector until it seems balanced from side-to-side. Mentally note the apparent center of gravity.
3. If not already. place the SpiroLock™ Projector Plate on top of the mounting legs with the center of the plate as close as possible to the projector's center of gravity.



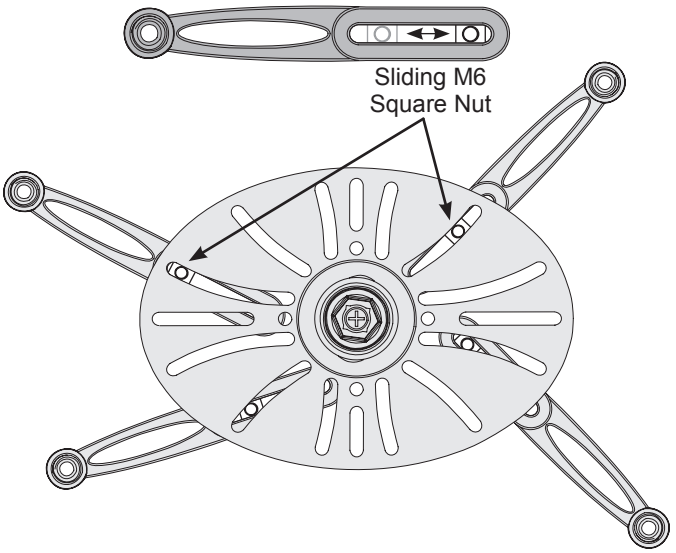
Attaching the Projector Plate (cont'd)

Step 5

❶ Verify that the mounting legs are at an equal height. Return to **Step 3** on page 12 if they are not at an equal height or the SpiroLock™ Projector Plate is not level.

❷ Verify the position of the integrated sliding M6 square nut in the mounting leg relative to a nearby slot on the SpiroLock™ Projector Plate.

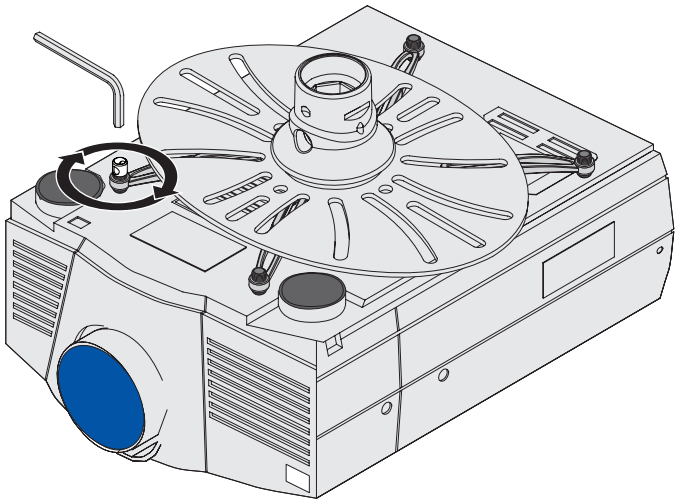
If the M6 square nut is not aligned with any slot, you can use any thin implement, such as a toothpick, to nudge it into alignment.



Step 6

Tighten the mounting screws which secure the mounting legs to the projector.

Do not overtighten the mounting screws.



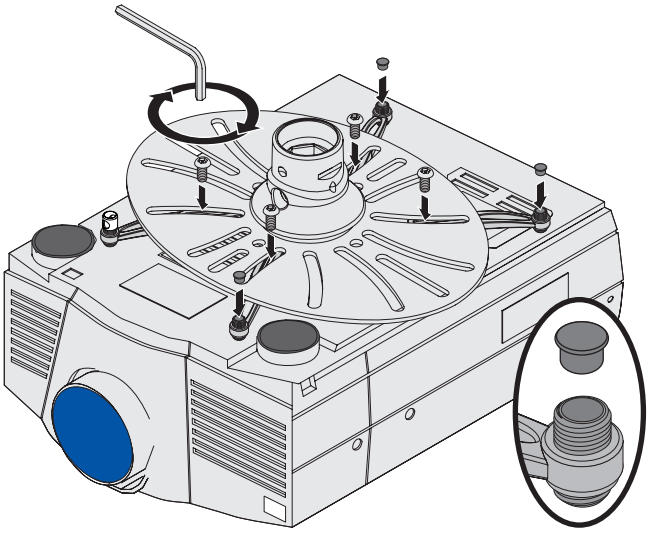
Step 7

❶ If not already, attach the SpiroLock™ Projector Plate to each of the mounting legs by inserting and tightening one (1) M6 x 12mm screw through the SpiroLock™ Projector Plate into the M6 square nut on each of the mounting legs.

Do not overtighten the M6 x 12mm screw.

❷ Insert one (1) barrel cap into the end of each leveling barrel (except for the Lock-It™ security barrel).

Proceed to **"Attaching the Projector to the Mount"** on page 14.

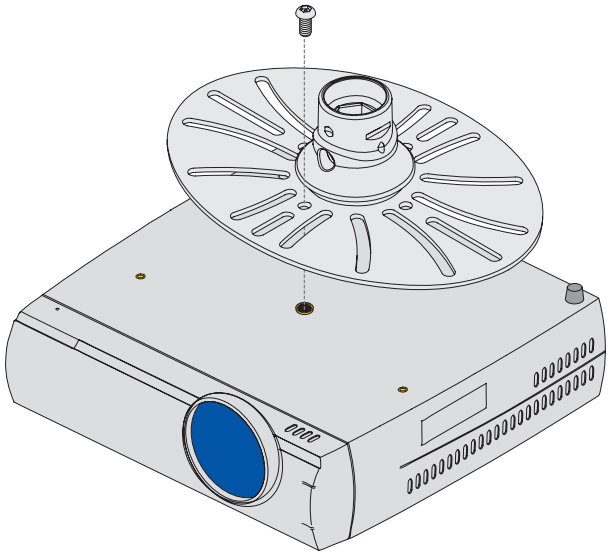


Attaching the Projector Plate (cont'd)

Single Mounting Point Installation

Use a single ¼-20 x 5/16″ screw to attach the SpiroLock™ Projector Plate to the projector if your projector has only one mounting point.

Do not overtighten the ¼-20 x 5/16″ screw.



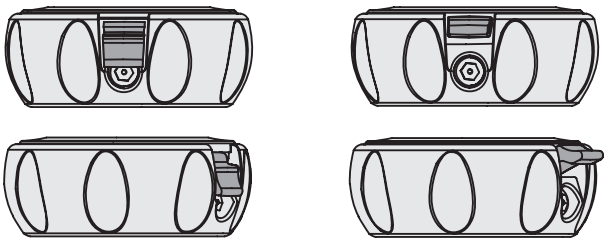
Attaching the Projector to the Mount

Step 1

If your projector is heavy and/or bulky, two people may be required to safely attach the projector to the SpiroLock™ Ceiling Plate or NPT pipe.

If your projector is to be mounted higher than shoulder height, you may need to use one or more ladders to safely attach the projector to the SpiroLock™ Ceiling Plate or NPT pipe.

STOP Verify that the locking tab on the SpiroLock™ collar assembly is in the raised position. If the locking tab is in the lowered position, lift the locking tab and rotate the SpiroLock™ collar assembly until it retains the locking tab in the raised position.



Locking Tab Lowered Position

Locking Tab Raised Position

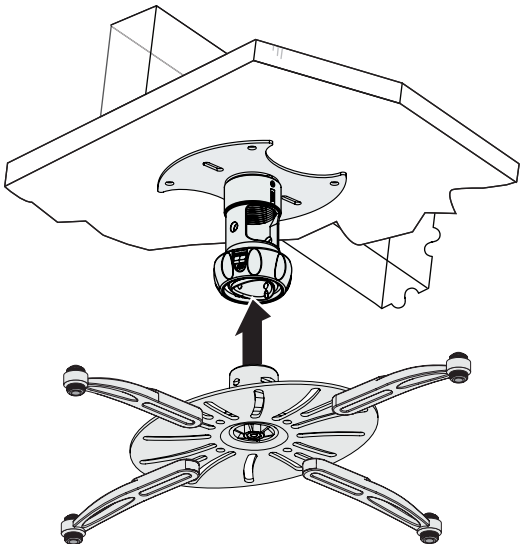
Step 2

1. Raise the projector with the SpiroLock™ Projector Plate securely attached to the SpiroLock™ Ceiling Plate or NPT pipe.
2. Insert the spindle into the SpiroLock™ collar assembly.
3. Press upward and rotate the projector as shown until the SpiroLock™ collar assembly locks into place. The SpiroLock™ collar assembly will rotate and produce an audible "click".

? Did the SpiroLock™ collar assembly lock into place?

If **Yes**, proceed to **Step 3**.

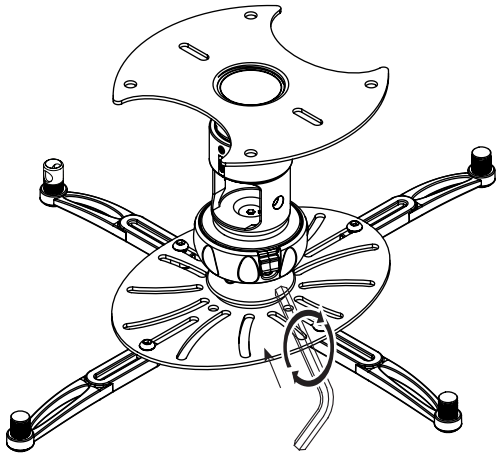
STOP If **No**, verify that the locking tab on the SpiroLock™ collar assembly is in the lowered position and that there was an audible "click". If the locking tab is in the raised position or you did not hear a "click", lower the projector and return to **Step 1**.



Attaching the Projector to the Mount (cont'd)

Step 3

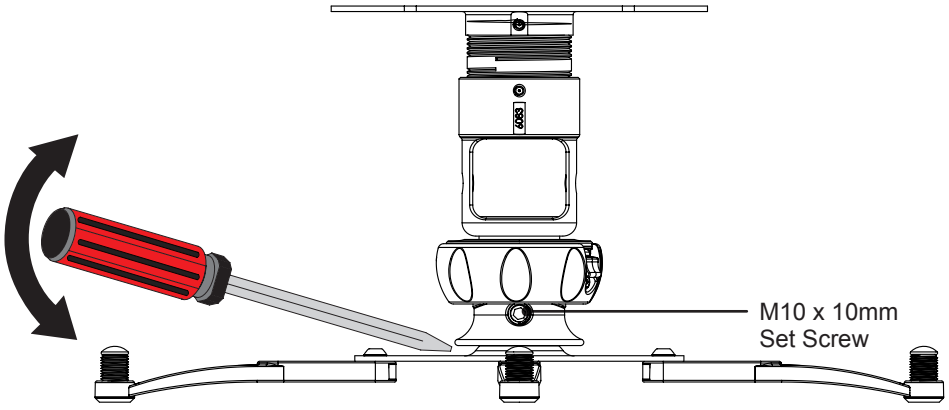
Tighten the M4 x 12mm Lock-It™ screw in the SpiroLock™ collar assembly.



Alignment & Fine-Tuning

1. Loosen the two (2) M10 x 10mm set screws to fine-tune the projector alignment.
2. Adjust the pitch, roll, and yaw of the projector up to 6° by firmly grasping the projector with both hands and slowly tilting it forward, backward, and side-to-side.
3. Make precise adjustments by placing the tip of a flat-blade screwdriver between the projector plate and the lip of the spindle, then using gentle leverage to make any adjustments.
4. Tighten the two set screws in the spindle to lock in your adjustments.

⚠ Do not overtighten the set screws.



Removing the Projector

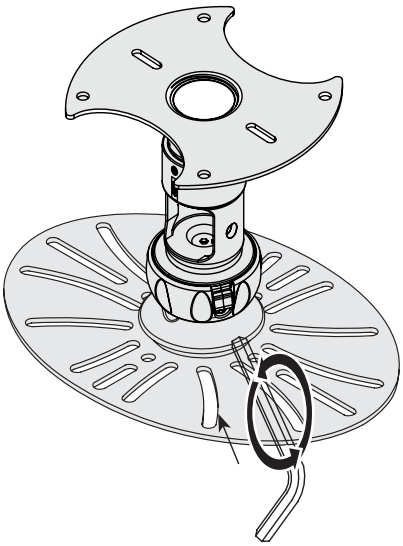
The SpiroLock™ projector mount can be removed quickly if the projector needs service.

If the projector is heavy and/or bulky, two people may be required to safely remove the projector from the SpiroLock™ Ceiling Plate or NPT pipe.

If the projector is mounted higher than shoulder height, you may need to use one or more ladders to safely remove the projector from the SpiroLock™ Ceiling Plate or NPT pipe.

Step 1

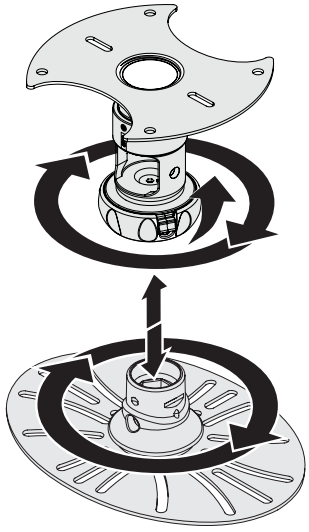
Use the M5 security Allen wrench to loosen the M4 x 12mm Lock-It™ screw.



Step 2

1. Place one hand under the projector to support it.
2. Lift the locking tab.
3. While lifting the locking tab, rotate the SpiroLock™ collar assembly 15 degrees clockwise until you hear an audible “click”.

   You may find it easier to lift the locking tab with the thumb of the same hand which rotates the SpiroLock™ collar assembly.
4. Use both hands to rotate the projector plate as shown to separate it from the SpiroLock™ collar assembly.
5. Place the projector on a soft, flat surface and disassemble the mounting legs from the projector, if neccessary.



Using the Lock-It™ Security Barrel

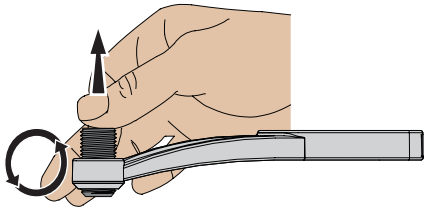
Use the security barrel to help lock the projector plate to the projector.

Attach a theft deterrent device (PCB-CSL1 or padlock) through the hole that is on the security barrel.

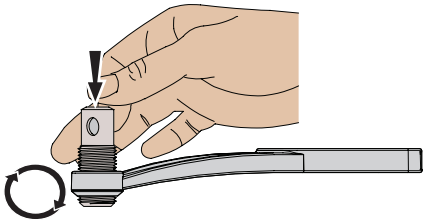
Do not overtighten the mounting screw.

Optional security configurations (not supplied) include:

- PCB-CSL1
- Padlock (Combination or Keyed)



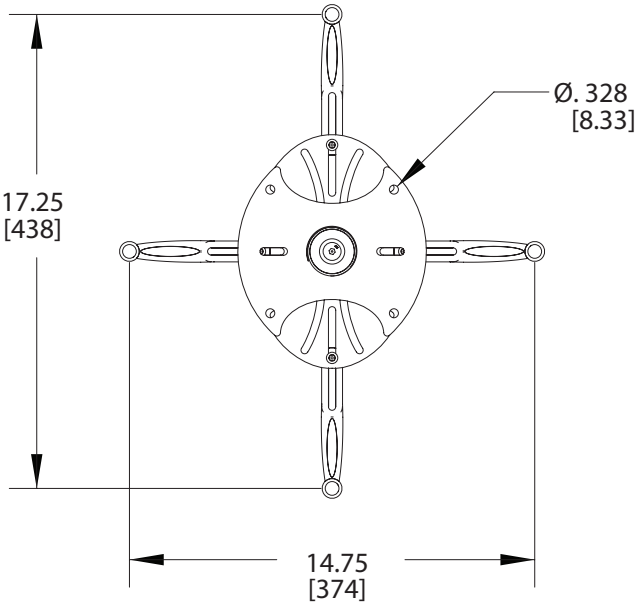
Counter-Clockwise

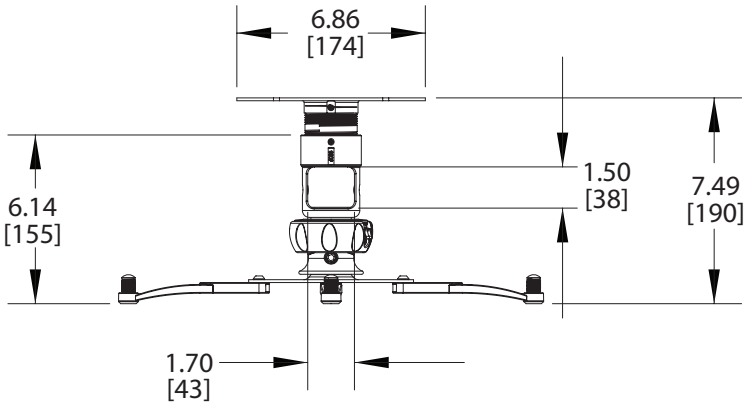


Clockwise

Technical Specifications

All measurements are in inches.





Warranty

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